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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,724	10/29/2003	Frank Probst	127.016	6336

7590

12/15/2004

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EXAMINER
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WALBERG, TERESA J

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/696,724	<b>Applicant(s)</b> PROBST, FRANK	
	<b>Examiner</b> Teresa J. Walberg	<b>Art Unit</b> 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-16, 18-24 and 27-33 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 17, 25, 26 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/29/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the Figure numbers appear to be hand written. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

2. The specification is objected to because it incorporates material by reference to specific claim numbers. See page 1, line 6. Since claims are subject to amendment and renumbering, the specification should be amended to include the material referred to by the claim number. Correction is required. See MPEP § 608.01(b).

3. Claims 10-17 are objected to because of the following informalities: These claims are directed to a method, but do not set forth any steps of the method to be performed. Appropriate correction is required.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 10-13, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Seitz et al (5,866,880).

Seitz et al disclose an electric heating device (10) and method of controlling an electric heating device including a plurality of heating elements (22, 34, 44, and 50 in Fig. 1) that are combined to form a heating block, and each of which is adapted to be controlled separately (see Fig. 15), a control device for controlling the heating elements, the power to each element being separately adjustable (col. 15, lines 24-31), the allocation of power to the individual heating elements being changed at predetermined time intervals (col. 18, lines 45-48), and the control of at least one heating element switching the element between maximum power and zero power (col. 15, lines 1-16), or being controlled by pulse width modulation (col. 11, lines 25-29).

Note that the phrase "used especially as an auxiliary heating for motor vehicles" has been interpreted to be a mere statement of intended use.

6. Claims 1-3 and 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirayama et al (2004/0099653).

Hirayama et al disclose an electric heating device (10) and method of controlling an electric heating device including a plurality of heating elements (21A, 22A, 23A, and 24A in Fig. 3) that are combined to form a

heating block (10), and each of which is adapted to be controlled separately (see abstract), a control device (25) for controlling the heating elements, the power to each element being separately adjustable (see para. 0051), the allocation of power to the individual heating elements being changed at predetermined time intervals (para. 0049), and the control of at least one heating element switching the element between maximum power and zero power (see Fig. 8).

Note that the phrase "used especially as an auxiliary heating for motor vehicles" has been interpreted to be a mere statement of intended use.

7. Claims 1-3 and 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Covillion (4,447,712).

Covillion discloses an electric heating device and method of controlling an electric heating device including a plurality of heating elements (10a-10e in Fig. 1) that are combined to form a heating block, and each of which is adapted to be controlled separately (see abstract), a control device (16) for controlling the heating elements, the power to each element being separately adjustable (see col. 2, lines 57-65), the allocation of power to the individual heating elements being changed at predetermined time intervals (Fig. 2), and the control of at least one

heating element switching the element between maximum power and zero power (see Fig. 2).

Note that the phrase "used especially as an auxiliary heating for motor vehicles" has been interpreted to be a mere statement of intended use.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4-7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama et al (2004/0099653) in view of Rudlich, Jr., et al (4,559,441).

Hirayama et al disclose the claimed structure and method with the exception of one heater having proportional control and the other heaters having on/off control.

Rudlich Jr., et al disclose a heater control system in which one heater has proportional control and the other heaters have on/off control.

It would have been obvious in view of Rudlich to provide one heater having proportional control and the other heaters having on/off control in the heater control system or Hirayama et al to enable more accurate control of the heating.

10. Claims 18-20 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beetz et al (2002/0011484) in view of Hirayama et al (2004/0099653).

Beetz et al disclose a motor vehicle auxiliary electric heating device including a plurality of separately controllable heating elements which are connected to one another so as to form a heating block and control transistors for controlling the heating elements. Beetz et al do not specify the functioning of the control system.

Hirayama et al disclose an electric heating device (10) and method of controlling an electric heating device including a plurality of heating elements (21A, 22A, 23A, and 24A in Fig. 3) that are combined to form a heating block (10), and each of which is adapted to be controlled separately (see abstract), a control device (25) for controlling the heating elements, the power to each element being separately adjustable (see para. 0051), the allocation of power to the individual heating elements being changed at predetermined time intervals (para. 0049), and the control of at least one heating element switching the element between maximum power and zero power (see Fig. 8).

It would have been obvious in view of Hirayama et al to provide a control system for the heating system of Beetz et al in which the heaters are individually controlled with the allocation of power to the heaters being

changeable at predetermined intervals and rotated between the heaters to enable more accurate control of the heating and minimize power usage.

11. Claims 21-24 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beetz et al (2002/0011484) in view of Hirayama et al (2004/0099653) as applied to claims 18-20 and 27-29 above, and further in view of Rudlich, Jr., et al (4,559,441).

Beetz et al in view of Hirayama et al disclose the claimed structure and method with the exception of one heater having proportional control and the other heaters having on/off control.

Rudlich Jr., et al disclose a heater control system in which one heater has proportional control and the other heaters have on/off control.

It would have been obvious in view of Rudlich to provide one heater having proportional control and the other heaters having on/off control in the heater control system or Hirayama et al to enable more accurate control of the heating.

12. Claims 8, 9, 17, 25, 26, and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



13. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose a control system of the type claimed in which the predetermined time intervals represent an integer multiple of a period of the pulse width modulation.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Braun et al is cited to show a power switching system for heaters.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 3742

A handwritten signature in black ink, reading "Teresa J. Walberg". The signature is fluid and cursive, with the first name "Teresa" and last name "Walberg" clearly distinguishable.

Teresa J. Walberg

Primary Examiner

Art Unit 3742

tjw